

This listing of claims will replace all prior versions of claims in the application.

Claims 1-35. (cancelled)

Claim 36. (new) An assay comprising

i) adding a substrate to a cell comprising GPCR-Rluc fusion protein and a β -arrestin-GFP fusion protein, wherein the β arrestin is mutated,

ii) adding a ligand to the admixture of i), and

iii) measuring a BRET signal to obtain a BRET ratio,

wherein an increased BRET ratio is provided compared with the ratios obtained by use of the same process employing a β -arrestin-GFP fusion protein wherein the β -arrestin is the wild type β -arrestin, or employing a β -arrestin-GFP fusion protein, wherein the β -arrestin is a β -arrestin specifically mutated so that it acts on the receptor independent of the receptors phosphorylation state.

Claim 37. (new) The assay of claim 36 wherein the ligand addition can provide a GPCR-Rluc/ β -arrestin-GFP complex.

Claim 38. (new) The assay of claim 37 wherein separation of β -arrestin-GFP from GPCR-Rluc/ β -arrestin-GFP complex is delayed and/or inhibited.

Claim 39. (new) The assay of claim 37 wherein internalization of the GPCR-Rluc/ β -arrestin-GFP complex is inhibited.

Claim 40. (new) The assay of claim 36 wherein β -arrestin is mutated so that its binding to clathrin and/or AP2 is impaired.

Claim 41. (new) The assay of claim 36 wherein β -arrestin is truncated so that it does not contain any clathrin and/or AP2 binding sites.

Claim 42. (new) The assay of claim 36 wherein β -arrestin is mutated by deletion, insertion or substitution so that one or more AP2 binding sites are impaired in their binding to AP2.

Claim 43. (new) The assay of claim 36 wherein β -arrestin is mutated so that its binding to phosphoinositide is impaired.

Claim 44. (new) The assay of claim 36 wherein the cell comprises a further amount of G-protein coupled receptor kinase (GRK) as compared to the amount of GRK naturally present in the cell.

Claim 45. (new) The assay of claim 44 wherein the G-protein coupled receptor kinase is GRK 2.

Claim 46. (new) The assay of claim 44 wherein the G-protein coupled receptor kinase is GRK 5.

Claim 47. (new) The assay of claim 36 wherein β -arrestin is further mutated so that it is phosphorylation independent.

Claim 48. (new) The assay of claim 36 wherein β -arrestin is originating from an animal source.

Claim 49. (new) The assay of claim 36 wherein β -arrestin is a β -arrestin-1 or β -arrestin-2.

Claim 50. (new) The assay of claim 36 wherein the β -arrestin is a human β -arrestin-1 374 stop mutant or human β -arrestin-2 373 stop mutant.

Claim 51. (new) The assay of claim 36 wherein the β -arrestin is a human β -arrestin-2 R393E;R395E mutant.

Claim 52. (new) The assay of claim 36 wherein the β -arrestin is a human β -arrestin-2 R393A;R395A mutant.

Claim 53. (new) The assay of claim 36 wherein the β -arrestin is human β -arrestin-2 K233Q;R237Q;K251Qmutant.

Claim 54. (new) The assay of claim 36 for use in drug discovery methods.

Claim 55. (new) The assay of claim 36 for use in high-throughput screening:

Claim 56. (new) The assay of claim 36 wherein the substrate is DeepBlueCTM.

Claim 57. (new) The assay of claim 36 wherein the substrate is used in the form of a solution from which no visual precipitate is formed after storage at room temperature for at least 30 minutes.

Claim 58. (new) The assay of claim 57 wherein the solution comprising the substrate comprises one or more organic solvents.

Claim 59. (new) The assay of claim 58 wherein the one or more organic solvents are selected from alkanols including ethanol, propanol, isopropanol, and butanol.

Claim 60. (new) The assay of claim 58 wherein the solvent is EtOH.

Claim 61. (new) The assay of claim 58 wherein the solution comprises from about 15% v/v EtOH to about 100 v/v% EtOH.

Claim 62. (new) The assay of claim 61 wherein the solution comprises DeepBlueCTM in 40% v/v EtOH.

Claim 63. (new) A solution comprising DeepBlueCTM and one or more organic solvents, wherein no visual precipitate is formed after storage at room temperature for at least 30 minutes.

Claim 64. (new) A solution of claim 63 wherein the one or more organic solvents are selected from alkanols including ethanol, propanol, isopropanol, and butanol.

Claim 65. (new) A solution of claim 63 wherein the solvent is EtOH.

Claim 66. (new) A solution of claim 65 comprising from about 15% v/v EtOH to about 100 v/v% EtOH.

Claim 67. (new) A solution according to claim 66 comprising DeepBlueCTM in 40% v/v EtOH.

Claim 68. (new) A method for preparing a solution of claim 63, the method comprising: diluting a stock solution of DeepBlueCTM in a solution comprising one or more organic solvents.

Claim 69. (new) The assay of claim 36 wherein a GPCR ligand is identified.

Claim 70. (new) The assay of claim 69 wherein the ligand is an agonist.

Claim 71. (new) The assay of claim 69 wherein the ligand is an antagonist.